

TRI PROJECT FACILITY SHEET

Facility Name: American Electric Power Muskingum River Plant
 Address: County Lane Road 32
 City, ST, Zip Code: Beverly, OH 45715
 County: Washington
 Contact Person: Patrick A. Dal Porto
 Title: Manager, Air Quality Services

Chemical Name: Hydrochloric acid
 One Time Release: Y/N Quantity: _____
 ERNS Report: Y/N Chemical Name: _____
 Quantity: _____
 Total Released 2003: 7300000/260 = 28076.92 per day
 Continuous Release Report: Y/N Chemical Name: 5,800,000 lb
 Air Permit: Y/N Water Permit: Y/N
 Inventory Reporting Section 312: Y/N

Chemical Name: Hydrogen Fluoride
 One Time Release: Y/N Quantity: _____
 ERNS Report: Y/N Chemical Name: _____
 Quantity: _____
 Total Released 2003: 380000/260 = 1461.54 per day
 Continuous Release Report: Y/N Chemical Name: 489,000
 Air Permit: Y/N Water Permit: Y/N

Chemical Name: Sulfuric acid
 One Time Release: Y/N Quantity: _____
 ERNS Report: Y/N Chemical Name: _____
 Quantity: _____
 Total Released 2003: 910000/260 = 3500 per day
 Continuous Release Report: Y/N Chemical Name: 1,458,000
 Air Permit: Y/N Water Permit: Y/N

Chemical Name: _____
 One Time Release: Y/N Quantity: _____
 ERNS Report: Y/N Chemical Name: _____
 Quantity: _____
 Total Released 2003: _____
 Continuous Release Report: Y/N Chemical Name: _____
 Air Permit: Y/N Water Permit: Y/N



May 11, 2001

U.S. EPA Region V
Office of CEPP Chemical Preparedness
77 West Jackson Blvd.
Chicago, IL 60604

Re: American Electric Power
Annual Follow-up Continuous Release Notification

Dear Sir or Madam:

Please find enclosed first anniversary follow-up reports on continuous release notifications for the following facilities:

Facility Name	CR-ERNS Number	Facility Location
Big Sandy Plant	522751	Louisa, KY 41230
Cardinal Plant	522824, 522825 & 522827	Brilliant, OH 43913
Conesville Plant	522818, 522820, 522822 & 522823	Conesville, OH 43811
Gavin Plant	522747 & 522748	Cheshire, OH 45620
Kammer Plant	522800	Moundsville, WV 26041
Mitchell Plant	522794	Moundsville, WV 26041
Mountaineer Plant	522753	New Haven, WV 25265
Muskingum River Plant	522754 & 522755	Waterford, OH 45786
Picway Plant	522789	Lockbourne, OH 43137
Rockport Plant	522778	Rockport, IN 47635
Philip Sporn Plant	522816 & 522817	New Haven, WV 25265

These reports are being submitted in accordance with 40 CFR §302.8 to follow up initial written notifications made in May 2000. These reports were prompted by the issuance of an interim guidance document by the Environmental Protection Agency on December 21, 1999 giving notice of specific interpretations of the definition of a "federally permitted release" under Section 101 (10)(H) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). AEP does not agree with the positions announced in the guidance and has participated in the review and evaluation of the initial guidance and subsequent guidance documents. However, the enclosed reports are based on the interpretations announced in the interim guidance.

Please note that the emissions reported in the enclosed reports represent a range of levels at which individual hazardous constituents may be present in the emissions associated with the normal operations of the major sources at our power plants. They do not represent "emergency" conditions, pose threats to public health or welfare or require specific emergency response or planning activities. Actual emissions will vary with hours of operation, fuel quality and other factors.

If you have any questions concerning the enclosed reports, please contact me at (614) 223-1246.

Sincerely,



Thomas R. Zelina
Manager, Waste Management and Mediation Services

**SECTION I: GENERAL
INFORMATION****CR-ERNS Number:**~~522755~~ and
522754**Date of Initial Call to NRC:** 03/13/00**Type of Report:** Indicate below the type of report you are submitting.

☐ Initial Written Notification ☒ First Anniversary
Follow-up Report ☐ Written Notification
of a Change to Initial Notification ☐ Written Notification
of a Change to Follow-up Report

Signed Statement: I certify that the hazardous substances releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

Dan Kohler, Plant Manager

Name and Position

May 10, 01
DateDan Kohler
Signature**Part A. Facility or Vessel Information****Name of Facility or Vessel**Muskingum River Unit Nos. 1, 2, 3 and 4; and
Muskingum River Unit No. 5**Person
in Charge
of Facility
or Vessel**

Name of Person in Charge Dan Kohler

Position Plant Manager

Telephone No. (740) 984-3450

Alternate Telephone No. ()

**Facility
Address or
Vessel
Port of
Registration**

Street Rural Route No. 2 - Box 310

County Morgan and Washington

City Waterford

State OH Zip Code 45786

Dun and Bradstreet Number for Facility

063765341

**Facility/Vessel
Location**

Latitude	Deg 039	Min 35	Sec 26
Longitude	Deg 081	Min 40	Sec 46

Vessel LORAN Coordinates**Part B. Population Information****Population
Density**

Choose the range that describes the population density within a one-mile radius of your facility or vessel (Indicate by placing an "X" in the appropriate blank below).

0 - 50 persons	101 - 500 persons	more than 1000 persons
X 51 - 100 persons	501 - 1000 persons	

**Sensitive
Populations
and
Ecosystems
Within One
Mile Radius**Sensitive Populations or Ecosystems
(e.g., schools, hospitals, wetlands, wildlife preserves, etc.)

Distance and direction from facility

State listed endangered and
threatened speciesLess than one mile at
multiple locations

**SECTION II: SOURCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.

For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Muskingum River Stack CS014

1. Indicate whether the release from this source is either:

continuous without interruption _____ **OR** routine, anticipated, intermittent X _____.

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

The releases associated with this source result from the combustion of fossil fuels to produce steam energy for production of electricity.

Calculations for releases of identified substances include periods of startup and shutdown and certain circumstances that may be defined as malfunctions under other state and federal regulatory programs but meet the requirements for inclusion in 40 CFR Part 302.8 Continuous Releases, and as incorporated by reference into 40 CFR Part 355 Emergency Planning and Notification.

3. Identify below how you established the pattern of release and calculated release estimates.

<u>X</u> Past release data	<u>X</u> Knowledge of the facility/vessel's operations and release history	<u>X</u> Engineering estimate
<u>X</u> AP-42	<u>X</u> Best professional judgment	_____ Other (explain)

* Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.

**SECTION II: SOURCE
INFORMATION
(continued)**

CR-ERNS Number: 522755 and 522754

Name of Source: Muskingum River Stack CS014

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☒ **AIR** X (stack X or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

If identified source is a **stack**, indicate stack height: 828 feet ~~or meters~~ **OR**

If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☒ **SURFACE WATER** (stream , lake , or other)

If the release affects any **surface water body**, give the name of the water body.

If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.
stream order: or average flow rate: cubic feet/second; **OR**

If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.
surface area of lake: acres and average depth of lake: meters.

☒ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

For a stack release to air, provide the following information, if available:

Inside diameter feet or meters

Gas Exit Velocity feet/second or
meters/second

Gas Temperature degrees Fahrenheit,
Kelvin, or Celsius

For a release to surface water, provide the following information, if available:

Average Velocity feet/second
of Surface Water

SECTION II: SOURCE INFORMATION (continued)

CR-ERNS Number:

522755 and
522754

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source

Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source:

Muskingum River Stack CS014

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)*		Number of Days Release Occurs (per year)	Total Quantity Released in Previous Year (in lbs. or kg)*	Months of the Release
		Upper Bound	Lower Bound			
Nitrogen oxide	10102439	430,062	194,207	365	30,012,000	12
Nitrogen dioxide	10102440	22,635	10,221	365	1,600,000	12
Hydrochloric acid	7647010	21,150	9,015	365	2,400,000	12
Hydrogen fluoride	7664393	1,418	605	365	268,000	12
Sulfuric acid	7664939	7,826	3,013	365	1,314,000	12
Mercury	7439976	1.2	0.5	365	349	12
Selenium dioxide	7446084	39.0	11.8	365	7,820	12
Calcium arsenate	7778441	10.5	2.7	365	988	12
Cyanides	57125	25.1	10.2	365	4,902	12

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance Components	CASRN#	Normal Range of Components (in lbs. or kg per day)*		Normal Range of Mixture (in lbs. or kg per day)*		Number of Days Release Occurs (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
		Weight Percentage	Upper Bound	Lower Bound	Upper Bound			

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

SECTION II: SOURCE INFORMATION

CR-ERNS Number: 522755 and
522754

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.

For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Muskingum River Stack 5

1. Indicate whether the release from this source is either:

continuous without interruption _____ OR routine, anticipated, intermittent X

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

The releases associated with this source result from the combustion of fossil fuels to produce steam energy for production of electricity.

Calculations for releases of identified substances include periods of startup and shutdown and certain circumstances that may be defined as malfunctions under other state and federal regulatory programs but meet the requirements for inclusion in 40 CFR Part 302.8 Continuous Releases, and as incorporated by reference into 40 CFR Part 355 Emergency Planning and Notification.

3. Identify below how you established the pattern of release and calculated release estimates.

<u>X</u> Past release data	<u>X</u> Knowledge of the facility/vessel's operations and release history	<u>X</u> Engineering estimate
<u>X</u> AP-42	<u>X</u> Best professional judgment	_____ Other (explain)

* Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.

**SECTION II: SOURCE
INFORMATION
(continued)**

CR-ERNS Number: 522755 and
522754

Name of Source: Muskingum River Stack 5

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

☒ **AIR** x (stack x or area) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

If identified source is a **stack**, indicate stack height: 828 feet ~~or meters~~; **OR**

If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: square feet or square meters.

☒ **SURFACE WATER** (stream , lake , or other)

If the release affects any **surface water body**, give the name of the water body.

If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.

stream order: or average flow rate: cubic feet/second; **OR**

If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.

surface area of lake: acres and average depth of lake: meters.

☒ **SOIL OR GROUND WATER**

If the release is on or under ground, indicate the distance to the closest water well.

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

For a stack release to air, provide the following information, if available:

Inside diameter feet or meters

Gas Exit Velocity feet/second or
meters/second

Gas Temperature degrees Fahrenheit,
Kelvin, or Celsius

For a release to surface water, provide the following information, if available:

Average Velocity feet/second
of Surface Water

CR-ERNS Number: 522754

522755 and
522754

Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Muskingum River Stack 5

Muskingum River Stack 5

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table I of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. per kg per day)*		Number of Days Release Occurs (per year)	Total Quantity Released in Previous Year (in lbs. per kg)	Months of the Release
		Upper Bound	Lower Bound			
Nitrogen oxide	10102439	127,717	126,507	365	23,400,000	12
Nitrogen dioxide	10102440	6,722	3,775	365	1,200,000	12
Hydrochloric acid	7647010	13,655	6,692	365	3,400,000	12
Hydrogen fluoride	7664393	916	449	365	221,000	12
Sulfuric acid	7664939	1,053	361	365	144,000	12
Selenium dioxide	7446084	25.1	8.7	365	6,630	12
Calcium arsenate	7778441	11.5	2.2	365	728	12
Cyanides	57125	14.1	8.3	365	3,902	12
Mercury	7439976	0.7	0.3	365	153	12

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances - A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance Components	Normal Range of Components (in lbs. or kg per day)* Upper Bound Lower Bound	Weight Percentage	CASRN#	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound Lower Bound	Number of Days Release Occurs (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
Name of Mixture							

* Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (Ci) are appropriate.

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Nitrogen oxide

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

<u>Name of Source(s)</u>	<u>Upper Bound of the Normal Range of the Release (specify lbs., kg, or Gg)</u>
Muskingum River Stack CS014	430,062
Muskingum River Stack 5	127,717

TOTAL - SSI trigger for this hazardous substance release* : 557,779

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Nitrogen dioxide

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)

**Upper Bound of the Normal Range of
the Release (specify lbs., kg, or Gg)**

Muskingum River Stack CS014

22,635

Muskingum River Stack 5

6,722

TOTAL - SSI trigger for this hazardous substance release* : 29,357

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Hydrochloric acid

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

<u>Name of Source(s)</u>	<u>Upper Bound of the Normal Range of the Release (specify lbs., kg, or Ci)</u>
Muskingum River Stack CS014	21,150
Muskingum River Stack 5	13,655

TOTAL - SSI trigger for this hazardous substance release* : 34,805

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CF-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Hydrogen fluoride

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)

**Upper Bound of the Normal Range of
the Release (specify lbs., kg, or G)**

Muskingum River Stack CS014

1,418

Muskingum River Stack 5

916

TOTAL - SSI trigger for this hazardous substance release* : 2,334

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Sulfuric acid

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

<u>Name of Source(s)</u>	<u>Upper Bound of the Normal Range of the Release (specify lbs., kg, or G)</u>
Muskingum River Stack CS014	7,826
Muskingum River Stack 5	1,053

TOTAL - SSI trigger for this hazardous substance release* : 8,879

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Mercury

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)

**Upper Bound of the Normal Range of
the Release (specify lbs., kg, or Ci)**

Muskingum River Stack CS014

1.2

Muskingum River Stack 5

0.7

TOTAL - SSI trigger for this hazardous substance release* : 1.9

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: selenium dioxide

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

<u>Name of Source(s)</u>	<u>Upper Bound of the Normal Range of the Release (specify lbs., kg, or G)</u>
Muskingum River Stack CS014	39.0
Muskingum River Stack 5	25.1

TOTAL - SSI trigger for this hazardous substance release* : 64.1

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

**SECTION III: SUBSTANCE
INFORMATION.**

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: calcium arsenate

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)

**Upper Bound of the Normal Range of
the Release (specify lbs., kg, or Gt)**

Muskingum River Stack CS014 10.5

Muskingum River Stack 5 11.5

TOTAL - SSI trigger for this hazardous substance release* : 22.0

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

SECTION III: SUBSTANCE INFORMATION

CR-ERNS Number: 522755 and
522754

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: cyanides

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Source(s)

Upper Bound of the Normal Range of the Release (specify lbs., kg, or G)

Muskingum River Stack CS014

25.1

Muskingum River Stack 5

14.1

TOTAL - SSI trigger for this hazardous substance release* : 39.2

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*